

See C1
B1

support along a rotating axial direction of the support so as to overlap at least widthwise edge portions of the wound rubber members with each other to form a first rubber layer; and

continuously extruding the first rubber material and adding a second rubber material through the extruder to create a blend of the first rubber material and the second rubber material, and stepwise or gradually increasing a blending ratio of the second rubber material to the first rubber material as a second band-shaped member while holding the same extrusion sectional shape and helically winding on the first rubber layer while overlapping with at least part of the first rubber layer and overlapping at least widthwise edge portions of the wound second band-shaped rubber member with each other to form a second rubber layer.

REMARKS

Claims 1-4 and 6-15 are pending. Claims 7 and 9-12 have been withdrawn from consideration. By this Amendment, claim 5 is cancelled and claim 1 is amended. Support for the amendments to claim 1 can be found in original claims 1 and 5, and at page 9, lines 20-28 of the instant specification. No new matter is added. In view of the foregoing amendments and following remarks, reconsideration and allowance are respectfully requested.

The attached Appendix includes a marked-up copy of the rewritten claim (37 C.F.R. §1.121(c)(1)(ii)).

Election of Species/Restriction Requirement

In reply to the Restriction Requirement, Applicants affirm their election of Group I, claims 1-4, 6-11, 13 and 14, with traverse. In reply to the Election of Species Requirement, Applicants affirm their election of Species B, with traverse. Applicants submit that at least claims 1-4, 6, 8 and 13-15 read on the elected species. Claims 1-4, 6 and 13-15 are believed to be generic to each of the alleged species identified in the Office Action.

It is respectfully submitted that the subject matter of all of claims 1-4 and 6-15 is sufficiently related that a thorough search for the subject matter of any one Group of claims would encompass a search for the subject matter of the remaining claims. Furthermore, it is believed that a thorough search for the subject matter of any one of the identified species would encompass a search for the subject matter of the remaining species. Thus, it is respectfully submitted that the search and examination of the entire application could be made without serious burden. See MPEP §803 in which it is stated that "if the search and examination of the entire application can be made without serious burden, the Examiner must examine it on the merits even though it includes claims to distinct or independent inventions" (emphasis added). It is respectfully submitted that this policy should apply in the present application in order to avoid unnecessary delay and expense to Applicants and duplicative examination by the Patent Office. Applicants further understand, however, that upon search, examination and allowance of the elected species, search and examination will continue as to the non-elected species within the scope of the generic claims.

Accordingly, withdrawal of the Restriction and Election of Species Requirements is respectfully requested.

Rejection Under 35 U.S.C. §102(b) or §103(a)

The Office Action rejects claims 1, 2, 5, 6, 8 and 13 under 35 U.S.C. §102(b) or, in the alternative, §103(a) over U.S. Patent No. 3,170,499 to Deist ("Deist"). Claim 5 is cancelled. Applicants respectfully traverse the rejection.

Deist does not anticipate and would not have rendered obvious the invention of claim 1. Claim 1 is directed to "a method of laminating band-shaped uncured rubber materials to form a laminated rubber member having a given sectional shape by helically winding a band-shaped uncured rubber material ... continuously extruding the first rubber material and adding a second rubber material through the extruder to create a blend of the first rubber

material and the second rubber material in the extruder, and stepwise or gradually increasing a blending ratio of the second rubber material to the first rubber material as a second band-shaped member while holding the same extrusion sectional shape and helically winding on the first rubber layer while overlapping with at least part of the first rubber layer and overlapping at least widthwise edge portions of the wound second band-shaped rubber member with each other to form a second rubber layer" (emphasis added). Deist does not teach or suggest such a method.

The Office Action asserts that Deist discloses forming a rubber laminate by helically winding a rubber strip, the strip initially including a first rubber material followed by a gradual blending with and eventual change to a second rubber material. However, Deist does not teach or suggest a method in which a first rubber material and a second rubber material are continuously extruded to produce a band-shaped member that is applied to a rotating support. In Deist, four blending mills and a calender are used to produce a diamond shaped cross-section ribbon. As shown in Figure 1, the calender 24, the fifth device used in the method of Deist, produces the diamond shaped cross-section ribbon. A first and second rubber material are not added to the calender 24 to create a blend, as in the claimed invention, because the material has already been blended before it enters the calender 24. In Deist, blending occurs in the blending mill 10. Three other blending mills are used to process rubber material. As a result, a vast space is required to perform the method of Deist. See instant specification at page 3, lines 5-19. In the method of claim 1, on the other hand, rubber materials are blended in the extruder, which creates the band-shaped uncured rubber material, which is in turn applied to the rotating member.

The Office Action states that while Deist is primarily directed to mills and calenders, it teaches that extruders can also be used. However, while Deist teaches that any one or more of the mills can be replaced by extruding means, the reference clearly teaches that "feed to

the extruder means would be controlled as described with reference to the feeding mills and calender." See column 7, lines 35-40. Even if only extruder means were applied in Deist, five separate extruders would be employed to ensure that feed to each component of Deist occurred in the same fashion as if mills and a calender were employed. Thus, a hypothetical extruding means used in place of the calender in Deist would not "create a blend" of rubber material as in the claimed invention, but rather, would receive a blended product from a blending mill or another extruder. To perform the method of Deist, even with extruding means, a great deal of space is required.

The Office Action further asserts that it would have been readily apparent to the ordinary artisan that the strip in Deist "is or would or should be wound in overlapping form on the tire support." However, even if such were the case, which Applicants do not admit, the Office Action provides no showing that it would have been obvious to wind the band-shaped rubber material of the instant invention so that at least widthwise edge portions of the wound rubber members overlap each other. In Deist, a diamond shaped cross-section ribbon is wound about a tire carcass. Deist does not provide any guidance with respect to whether the diamond shaped cross-section ribbon is wound in overlapping form. Thus, Deist does not anticipate the claimed invention. Further, the Office Action provides no showing that it would have been obvious to wind the band-shaped rubber material of the claimed invention in overlapping form. Accordingly, a *prima facie* case of obviousness has not been made.

For at least the above reasons, Deist does not anticipate and would not have rendered obvious the method of claim 1. Claims 2, 6, 8 and 13 depend from claim 1, and so, also are not anticipated and would not have been rendered obvious by Deist. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

Rejection Under 35 U.S.C. §103(a)

The Office Action rejects claims 3, 4, 14 and 15 under 35 U.S.C. §103(a) over Deist.

Applicants respectfully traverse the rejection.

For the reasons set forth above, Deist would not have rendered the invention of claim 1 obvious. Claims 3, 4, 14 and 15 depend from claim 1, and so, also would not have been rendered obvious by Deist. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

Rejection Under 35 U.S.C. §102(e)

The Office Action rejects claims 1, 2, 5, 6, 8 and 13 under 35 U.S.C. §102(e) over U.S. Patent No. 6,039,826 to Okada ("Okada"). Claim 5 is cancelled. Applicants respectfully traverse the rejection.

Okada does not disclose each and every limitation of claim 1. As stated, claim 1 is directed to a method of laminating band-shaped uncured rubber materials to form a laminated rubber member having a given sectional shape including "continuously extruding the first rubber material and adding a second rubber material through the extruder to create a blend of the first rubber material and the second rubber material, and stepwise or gradually increasing a blending ratio of the second rubber material to the first rubber material" (emphasis added). Okada does not anticipate such a method.

The Office Action asserts that Okada teaches a method including extruding and winding a first rubber material and subsequently extruding and winding a second rubber material, and that such a method constitutes stepwise increasing the blending ratio of the two rubber materials. The Office Action admits, however, that Okada does not teach mixing the two rubber materials. In the method of instant claim 1, the second rubber material is added to the extruder to create a blend of the first rubber material and the second rubber material.

Okada does not teach a blend of first and second rubber materials. For at least this reason, Okada does not disclose each and every element of claim 1.

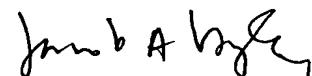
Claim 1 is not anticipated by Okada. Claims 2, 6, 8 and 13 depend from claim 1, and so, accordingly, also are not anticipated by the cited reference. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

Conclusion

In view of the foregoing amendments and remarks, Applicants submit that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-4, 6, 8 and 13-15 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below.

Respectfully submitted,



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Attachment:
Appendix

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DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461
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APPENDIX

Changes to Claims:

Claim 5 is canceled.

The following is a marked-up version of the amended claim:

1. (Amended) A method of laminating band-shaped uncured rubber materials to form a laminated rubber member having a given sectional shape by helically winding a band-shaped uncured rubber material extruded through an extruder on a rotating support, which comprises using two or more rubber compositions indicating different moduli after the curing as a rubber material fed to the extruder;

extruding a first rubber material through the extruder as a first band-shaped rubber member and helically winding ~~it~~the first band-shaped rubber member on the rotating support along a rotating axial direction of the support so as to overlap at least widthwise edge portions of the wound rubber members with each other to form a first rubber layer; and

continuously extruding the first rubber material and adding a second rubber material through the extruder to create a blend of the first rubber material and the second rubber material, and so as to stepwise or gradually increaseincreasing a blending ratio of the second rubber material to the first rubber material as a second band-shaped member while holding the same extrusion sectional shape and helically winding on the first rubber layer while overlapping with at least part of the first rubber layer and overlapping at least widthwise edge portions of the wound second band-shaped rubber member with each other to form a second rubber layer.